

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of the claims in the application. The language to be added is shown with an underline, and the language to be deleted is shown with a strikethrough.

**Listing of Claims**

1-9. (Cancelled)

10. (Currently Amended) An assay for detecting a mammalian troponin molecule in animal feed, the assay comprising:

- a) extracting proteins ~~the mammalian troponin molecule~~ from the animal feed to form an animal feed extract;
- b) reacting the animal feed extract with a ligand that is specific for a the ~~the~~ mammalian troponin molecule from at least two mammalian species and is not specific for an avian troponin molecule for a time and under conditions sufficient to form a complex between the ligand and the mammalian troponin molecule; and
- c) detecting the complex either directly or indirectly as a measure of the presence or amount of the mammalian troponin molecule in the animal feed extract; ~~and,~~

wherein the ligand is an antibody produced by immunizing an animal with a peptide having an amino acid sequence selected from the group consisting of SEQ ID NOS: 2-6 and 15-28 ~~, 9-13 and 15-35~~ , and wherein the presence of the mammalian troponin molecule in the animal feed extract indicates the presence of the mammalian troponin molecule in the animal feed.

11. (Previously Presented) The assay of Claim 10, wherein the mammalian troponin molecule is a troponin I molecule.

12. (Currently Amended) The assay of Claim 10, wherein the mammalian troponin molecule is a troponin I molecule ~~selected from the group consisting of a slow twitch skeletal muscle troponin I molecule and a fast twitch skeletal muscle troponin I molecule.~~

13. (Previously Presented) The assay of Claim 10, wherein the ligand is an antibody and the troponin molecule is a polypeptide.

14. (Cancelled).

15. (Currently Amended) The assay of Claim 10, wherein the ligand binds to a peptide having an amino acid sequence selected from the group consisting of SEQ ID NOS: 2-6 and 15-28, ~~9-13, and 15-35~~.

16. (Currently Amended) The assay of Claim 10, wherein the ligand binds to a nucleic acid molecule encoding a peptide having an amino acid sequence selected from the group consisting of SEQ ID NOS: 2-6 and 15-28, ~~9-13, and 15-35~~.

17. (Previously Presented) The assay of Claim 10, wherein the ligand is specific for an equine troponin I protein, a porcine troponin I protein or a bovine troponin I protein.

18. (Cancelled).

19. (Cancelled).

20. (Withdrawn, Currently Amended) An assay for detecting a mammalian troponin molecule in animal feed, the assay comprising:

- a) extracting proteins ~~the mammalian troponin molecule~~ from the animal feed to form an animal feed extract;
- b) reacting the animal feed extract with a ligand that is specific for a the mammalian troponin molecule from at least two mammalian species and is not specific for an avian troponin molecule for a time and under conditions sufficient to form a complex between the ligand and the mammalian troponin molecule; and
- c) detecting the complex either directly or indirectly as a measure of the presence or amount of the troponin molecule in the animal feed extract;

wherein the ligand is specific for an equine troponin I protein, a porcine troponin I protein or a bovine troponin I protein; ~~and~~, wherein the ligand is an antibody produced by immunizing an animal with a peptide having an amino acid sequence selected from the group consisting of SEQ ID NOS: 3-6 and 15-28 ~~3-6, 9-13 and 15-35~~, and wherein the presence of the mammalian troponin molecule in the animal feed extract indicates the presence of the mammalian troponin molecule in the animal feed.